

Lawrence Berkeley National Laboratory



PSD 0135

Emergency Management General Awareness Training

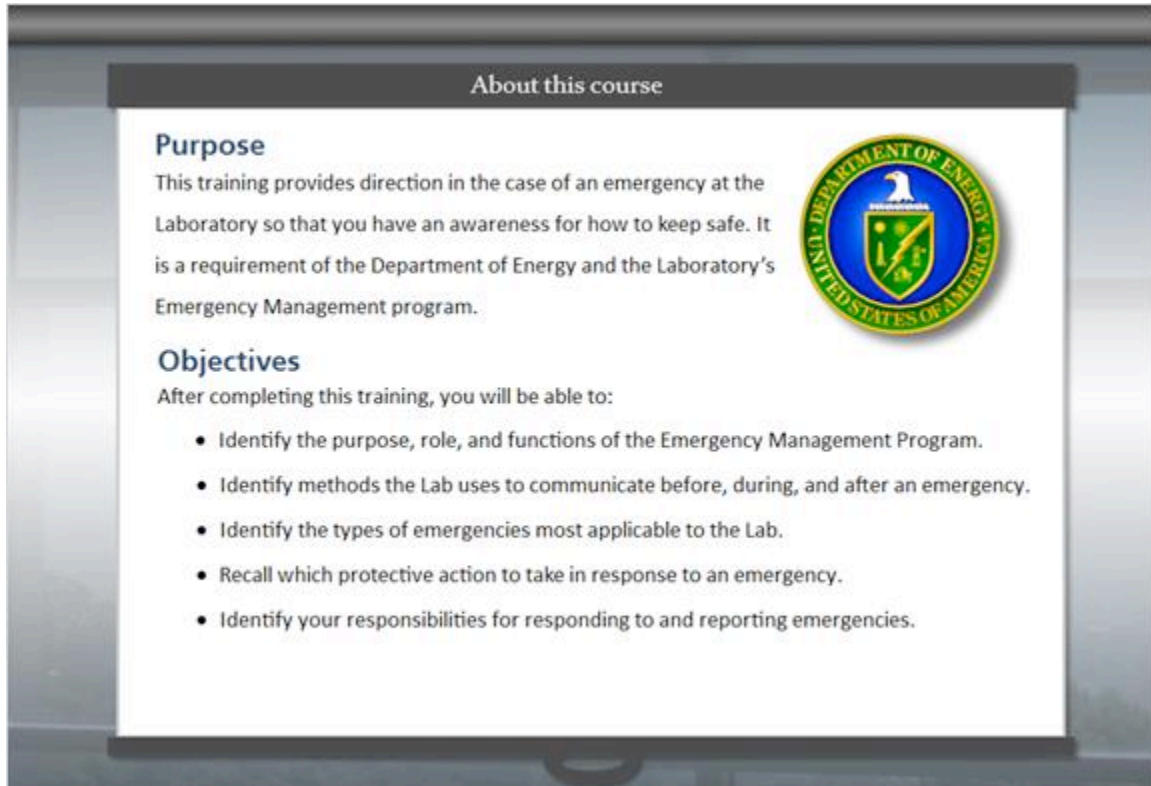
PSD 0135

Emergency Management General Awareness Training

This is the (PDF) version of the online training. This version is for staff who do not have audio capabilities on their computer and therefore cannot complete the online training. The online training has interactive quiz questions and videos that are not included in this PDF version.

After reading this document, please use the link at the end to access Berkeley Lab Training and sign the electronic acknowledgement necessary to receive credit for this training. If you need assistance, or have questions about this training, please contact Berkeley lab Training (510) 495-2228, or email training@lbl.gov

1.3 About this Course




About this course

Purpose
This training provides direction in the case of an emergency at the Laboratory so that you have an awareness for how to keep safe. It is a requirement of the Department of Energy and the Laboratory's Emergency Management program.

Objectives
After completing this training, you will be able to:

- Identify the purpose, role, and functions of the Emergency Management Program.
- Identify methods the Lab uses to communicate before, during, and after an emergency.
- Identify the types of emergencies most applicable to the Lab.
- Recall which protective action to take in response to an emergency.
- Identify your responsibilities for responding to and reporting emergencies.

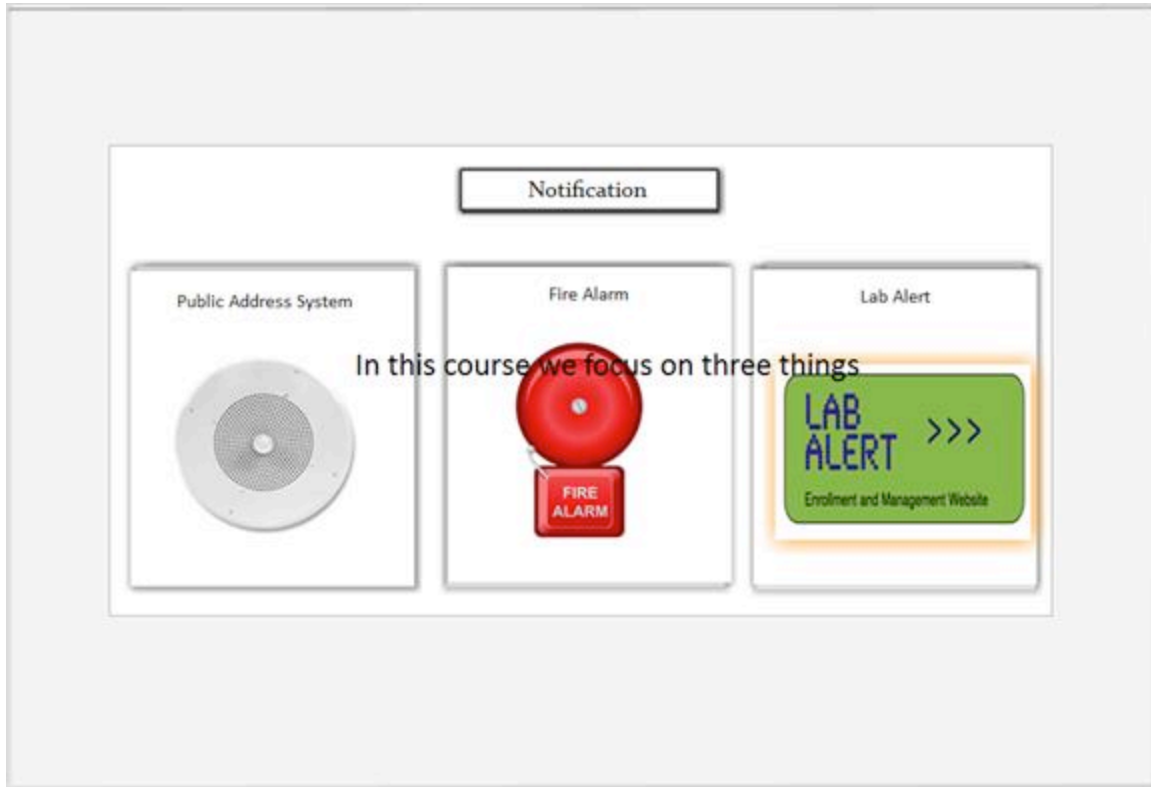


Notes:

Here is the purpose and objectives of this training.

4. Emergency Management

4.1 Introduction



Notes:

In this course, we focus on three things.

1. First we go over how the Lab notifies staff in the event of an emergency.
2. Second We go over three types of emergencies most applicable to us here at the Lab (that we need to be prepared for) and
3. third we present three protective actions that can be enacted in response to an emergency to keep safe.

4.2 The Role of Emergency Management



Narration:




The Lab's Emergency Management Program is part of Protective Services.

It is designed to provide the Lab with planning and coordination functions necessary for preparing for, responding to, mitigating against, and recovering from emergencies.

- Protect the health and safety of workers and the public in an emergency.
- Prevent damage to the environment.
- Secure the laboratory's assets.
- and ensure that essential functions can continue.

4.3 Categories of Emergencies

There are three main categories of emergencies

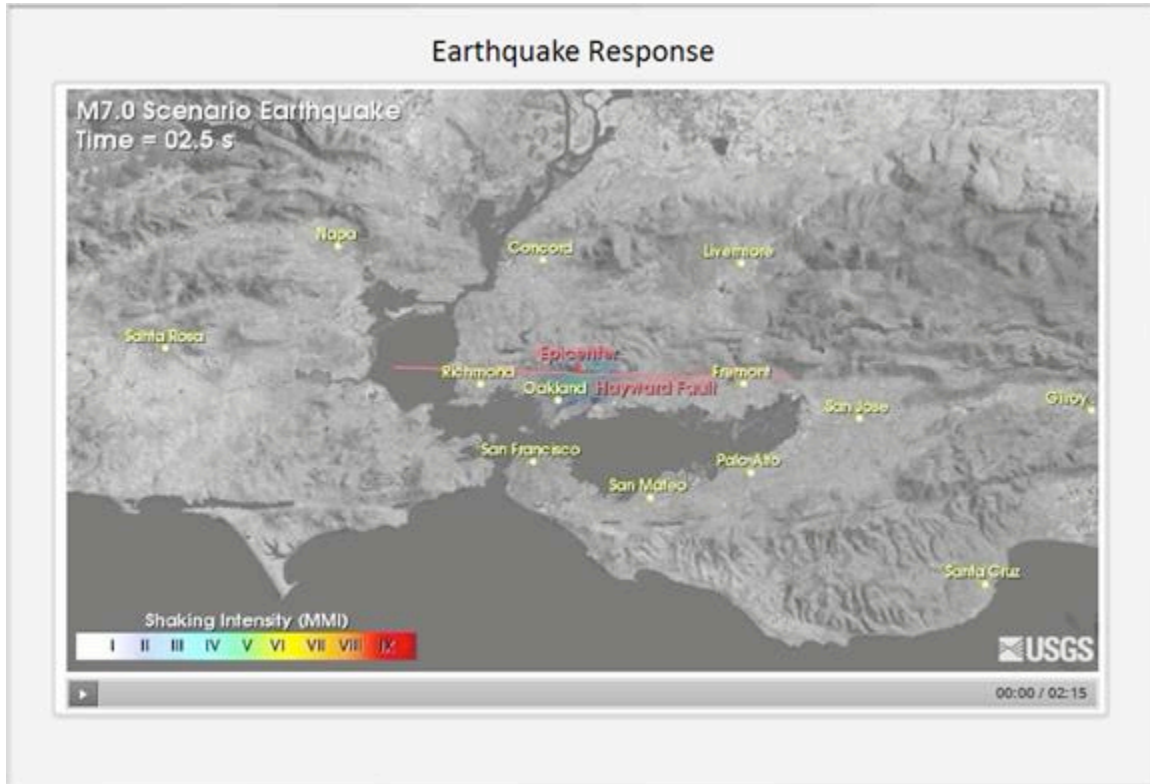
Natural Phenomena	Human-caused	Technological
		

[Continue](#)

Narration:

There are three categories of emergencies (Natural phenomena) and we will focus on earthquakes and wildland fires because they're most applicable to us. Then there's human-caused emergencies. These include malevolent acts, cyber-attacks and security events. Then there's technological emergencies and of these we go over hazardous materials release. And we start with earthquake response.

4.4 Earthquake response



Video Narration:

This USGS video simulates a 7.0 earthquake on the Hayward fault centered in Oakland. This simulation provides detailed pictures of what shaking we should expect in such earthquakes. Here is the time being tracked and here the intensity of shaking during the quake. I'm cutting it short, but this earthquake continues for another minute. This is a simulation of shaking at the ground level. These simulated tests show the potential dangers from environmental hazards created by an earthquake.

Being struck by falling or flying objects is the main cause of injury in earthquakes. This is why it is good to keep heavy items on lower shelves, and to secure heavy or awkwardly shaped items that are raised so they don't shift or fall. It is also why the lab requires having either doors on shelving to keep things from falling, or having restraining mechanisms such as 3/4-inch-tall lips at the front of shelves.

And if you have file cabinets, bookcases, electronics racks, or other furnishings that are more than 4 feet high or that could block a door or exit, they need to be secured against toppling, and cylinders need to be restrained as well.

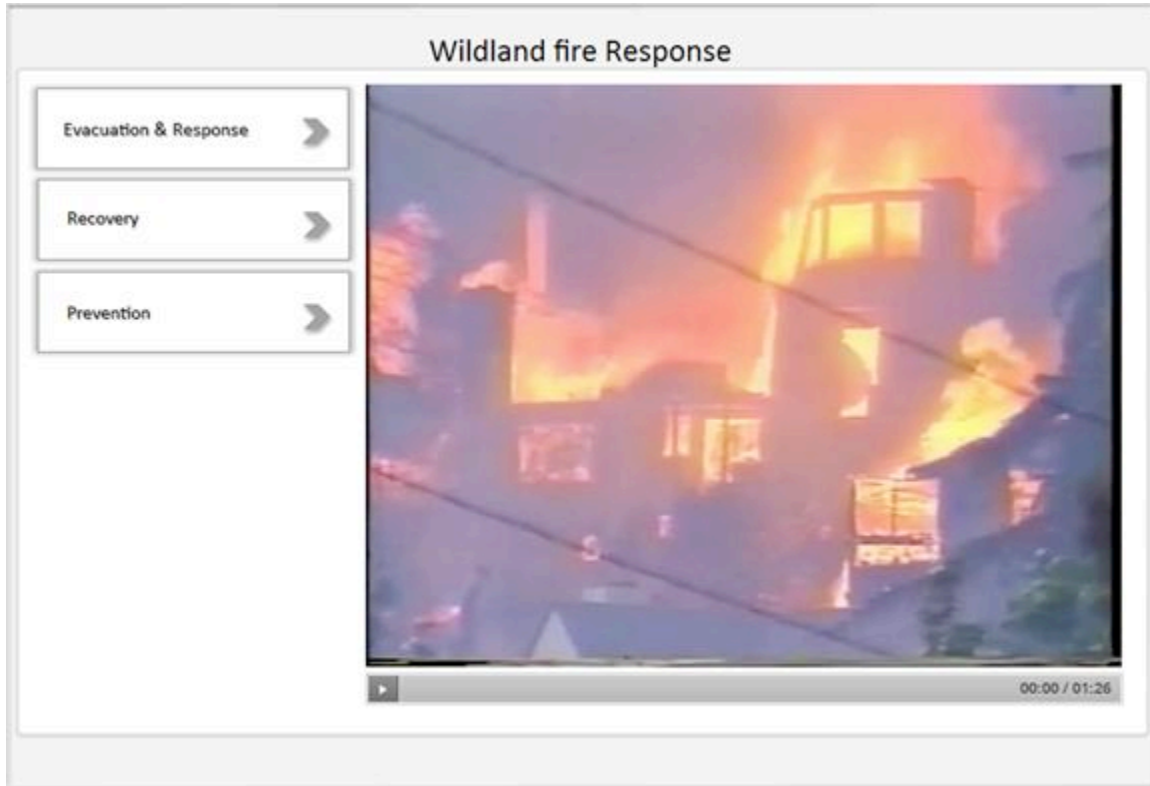
These are just a few examples but the guidance is available in the Seismic safety chapter of the RPM, but aside from the specifics a good place to start is to look around your work area and identify items that may fall, or block an exit if not properly secured, and to identify areas to take cover, which we look at next.

When shaking starts it's extremely important to immediately protect yourself. Always remember to drop, cover and hold on. This may be a desk or a conference table, or if you're in an area where there isn't something to take cover under, if you can find a place in a corner or against a wall that is away from windows or other things that could fall, crouch down as shown and protect your head with your arms.

After the shaking has stopped Look around to make sure it is safe to move, then immediately evacuate the building. Be careful when leaving the building because there may be broken glass, fallen objects with sharp edges, chemical spills, etc. If possible, be sure to take all vital belongings with you such as your car keys, etc., because reentry into the building may not be possible for several hours or days.

DO NOT use elevators. Follow the evacuation routes established for your building. You should familiarize yourself with these in advance, they are posted at the entrance to your building. Go To the nearest, safest Emergency Assembly Area. Here you will receive further instructions from the Building Emergency Team. Remain at the Assembly area until you're cleared to leave.

4.5 Wildland fires response



Video Narration:

On October 20th 1991, a monstrous fire roared through parts of Oakland and Berkeley destroying over 3,000 homes, 450 apartments and resulting in 25 fatalities and 150 injuries. Three square miles were devastated. Once a fire does become a fire storm there's virtually nothing human beings can do except get out of its way. (video shows people evacuating Berkeley and Oakland hills, and it is very chaotic. Emergency responders want people to leave their cars and evacuate by foot but people are not listening.)

Always follow instructions from emergency personnel. Evacuating 4,000 people from the site takes a lot of coordination and requires everyone to follow directions. Vehicle traffic can quickly become gridlocked making it virtually impossible to drive off the hill. Consequently, you may be required to abandon your car and evacuate on foot. However, if instructions are to evacuate by vehicle make sure you follow instructions so you know which roads and which exits to use. You may need to use an exit you don't use frequently, and since many people arrive on public transportation and on bikes offer rides to others. The main message is to follow all instructions for orderly evacuation so everyone is safe.

Evacuation Response:

Response

If a wildland fire is, or is expected to, impact the laboratory during business hours you will receive emergency notification of Protective Action implementation either to evacuate or to shelter-in-place. All personnel must strictly adhere to Protective Actions in order to ensure everyone's safety, particularly if the site is to be evacuated.

Evacuation

Remember evacuating the main site includes the need to:

- Be aware of multiple routes to exit the LBNL main site, you may need to use one in an emergency that you may otherwise not use frequently.
- Be aware of multiple routes home from the main site.
- Offer rides to others. There are 4,300 people on the LBNL main site and only 1,700 parking spots. Many employees use public transport that may not be available in an emergency.
- Leave only when your building is instructed to do so. This prevents traffic congestion that can trap people in a fire's path.

Wild fire prevention:

Reduce the risk of wildfires by taking steps to limit sparks and other ignition sources by:

- Ensuring you have a hot work permit before conducting any process that may generate heat or sparks.
- On Red Flag Warning days, eliminating activities that could generate sparks such as
 - Lawn mowing
 - Mechanical weed-eating
 - Outdoor welding
 - Landscaping activities that may place a hot engine near dry vegetation.

- Make sure cigarette butts are properly extinguished and only smoke in pre-designated areas.

Wildfire recovery:

If the laboratory has experienced an evacuation due to a wildfire:

- Please stay in contact with your supervisor for instructions to return to work.
- Ensure you have included your cellular contact information with Lab Alert so you can receive emergency texts from off site.
- Check status.lbl.gov for updates to the laboratory's operating status.

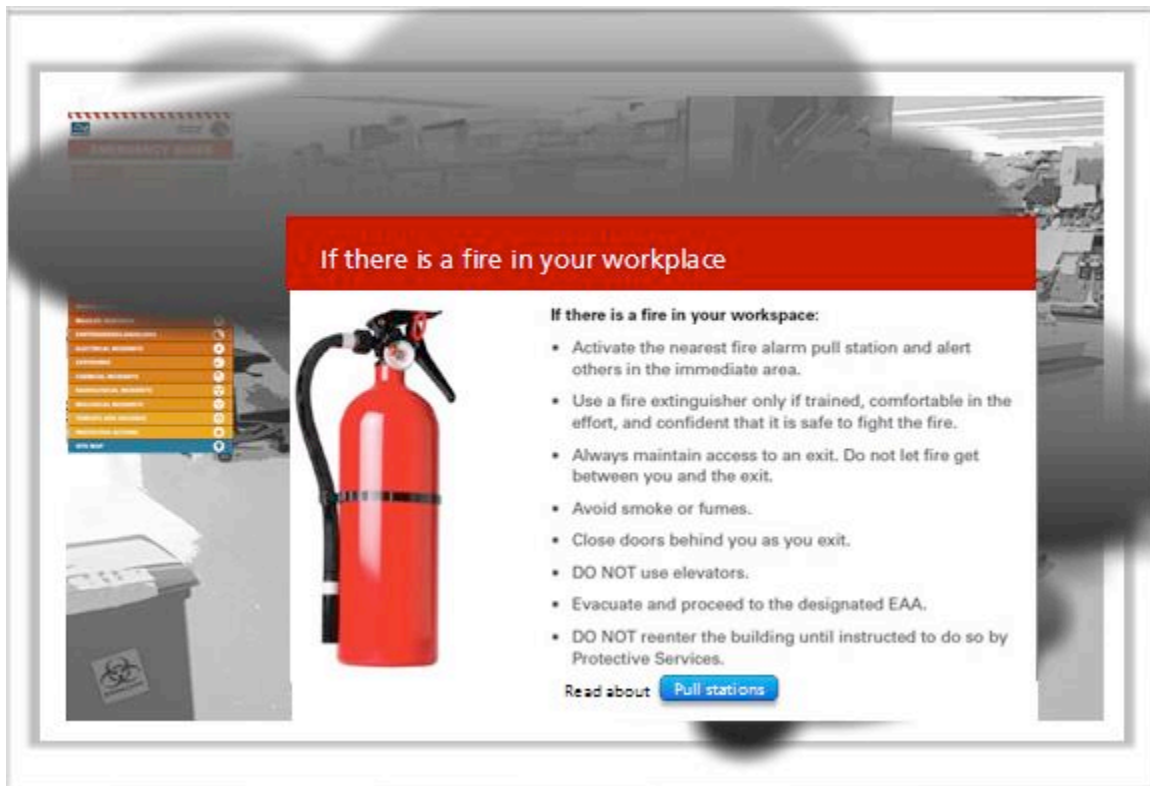
Fire Response:



Narration:


You are in a lab and a fire breaks out. Click the emergency guide to see what to do.

This is from the fire alarms section of the emergency guide.



The screenshot shows a webpage with a red header bar containing the title "If there is a fire in your workplace". To the left of the main content is a vertical sidebar with a list of emergency topics: Biological, Chemical, Radiological, and other hazards. The main content area features a large image of a red fire extinguisher. To the right of the extinguisher is a list of instructions for what to do in case of a fire. At the bottom of this list is a "Read about" link followed by a blue button labeled "Pull stations".

If there is a fire in your workplace

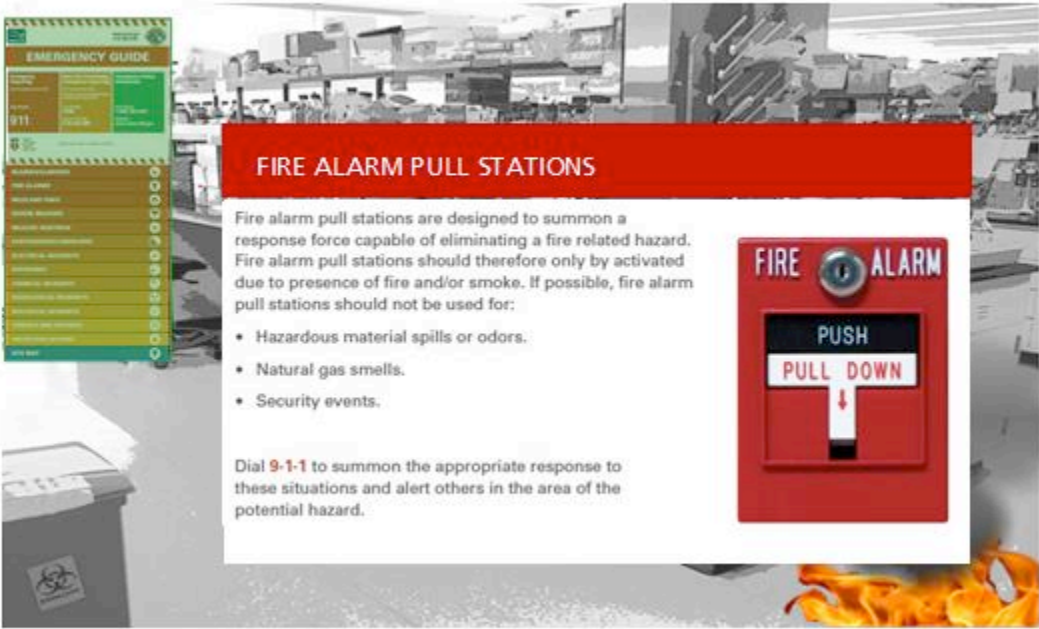


If there is a fire in your workspace:

- Activate the nearest fire alarm pull station and alert others in the immediate area.
- Use a fire extinguisher only if trained, comfortable in the effort, and confident that it is safe to fight the fire.
- Always maintain access to an exit. Do not let fire get between you and the exit.
- Avoid smoke or fumes.
- Close doors behind you as you exit.
- DO NOT use elevators.
- Evacuate and proceed to the designated EAA.
- DO NOT reenter the building until instructed to do so by Protective Services.

Read about [Pull stations](#)

pull stations



EMERGENCY GUIDE

911

FIRE ALARM PULL STATIONS

Fire alarm pull stations are designed to summon a response force capable of eliminating a fire related hazard. Fire alarm pull stations should therefore only be activated due to presence of fire and/or smoke. If possible, fire alarm pull stations should not be used for:

- Hazardous material spills or odors.
- Natural gas smells.
- Security events.

Dial **9-1-1** to summon the appropriate response to these situations and alert others in the area of the potential hazard.

FIRE ALARM

PUSH

PULL DOWN


4.7 Hazardous Materials

Hazardous Materials Release

Employee Actions

Emergency Communication

Hazardous Materials



Hazardous Material

Some activities at LBNL involve biological agents, chemicals, and radiological materials. Although there are not significant quantities of biological and radiological materials, there are a number of chemicals that if released may pose an acute airborne health hazard.

Areas that have these materials have been identified and require additional planning efforts to keep first responders safe while allowing for quick implementation of protective actions to limit harm to people.

Protective actions for a hazardous materials release include Evacuate and/or Shelter-in Place.

Notes:

Please take a moment to read this information about actions to take in the event of a hazardous materials release.

Employee Action:

To protect yourself from a hazardous material event it is critical that you:

- Familiarize yourself with your building's emergency exits and procedures.
- Update your information in [LabAlert](https://commons.lbl.gov/display/itdivision/LabAlert+-+Emergency+Broadcast+Service) (<https://commons.lbl.gov/display/itdivision/LabAlert+-+Emergency+Broadcast+Service>) so that Protective Action information can be sent to you as quickly as possible.

During an event, follow the direction of first responders exactly. It may take time to resolve the event and to provide updates to personnel taking a Protective Action. It is

important that you understand that first responders will provide a status update to you, release the Protective Action, or assist in implementing the Protective Action as soon as possible. You should not make assumptions about the level of safety after a period of time, and use this as a basis to leave your Protective Action.

Hazardous Materials:

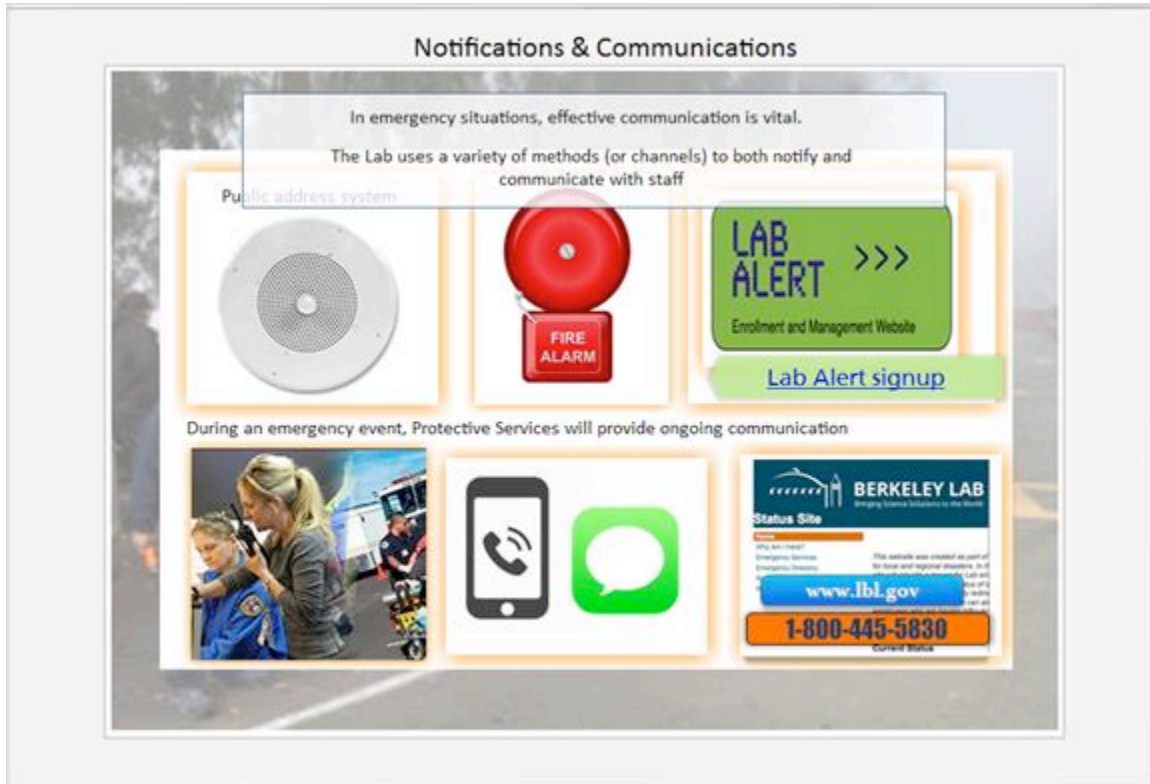
These materials require additional level of planning and can potentially cause the following health issues:

- Respiratory distress
- Blindness
- Permanent respiratory issues
- Chemical burns
- Loss of consciousness
- Death

Emergency Communication

If a Hazardous Material event has occurred, or is expected to occur (during business hours), Protective Services will communicate what to do which could be to evacuate or to shelter-in-place. You must implement the Protective Action(s) that are communicated in order to ensure everyone's safety, particularly if the site is to be evacuated.

4.8 Emergency Notifications



Narration:

In emergency situations, effective communication is vital so that you know how to respond to keep safe. If there is an emergency the Lab uses a variety of methods (or channels) to both notify and communicate with staff. Staff are notified of an emergency event through PA system announcements, fire alarms and Lab Alert, which is a service you need to sign up for online and which will send you notifications via email, and text message.




During an emergency event, Protective Services will provide ongoing communication containing instructions for protective action implementation. This communication is done using radio, cell phone and text messaging, and by providing updates using the LBNL Status Hotline 1-800-445-5830 and the main LBNL website.

4.9 Protective Actions

Protective Actions

Now that we understand the types of emergencies that could occur and have an understanding of the notification and communication process.

Once implemented Protective Actions remain in effect until emergency responders give the all clear.

<p>Evacuate</p> 	<p>Shelter in Place</p>  <p style="font-size: small;">Shelter in Place</p>	<p>Lockdown</p> 
--	--	--

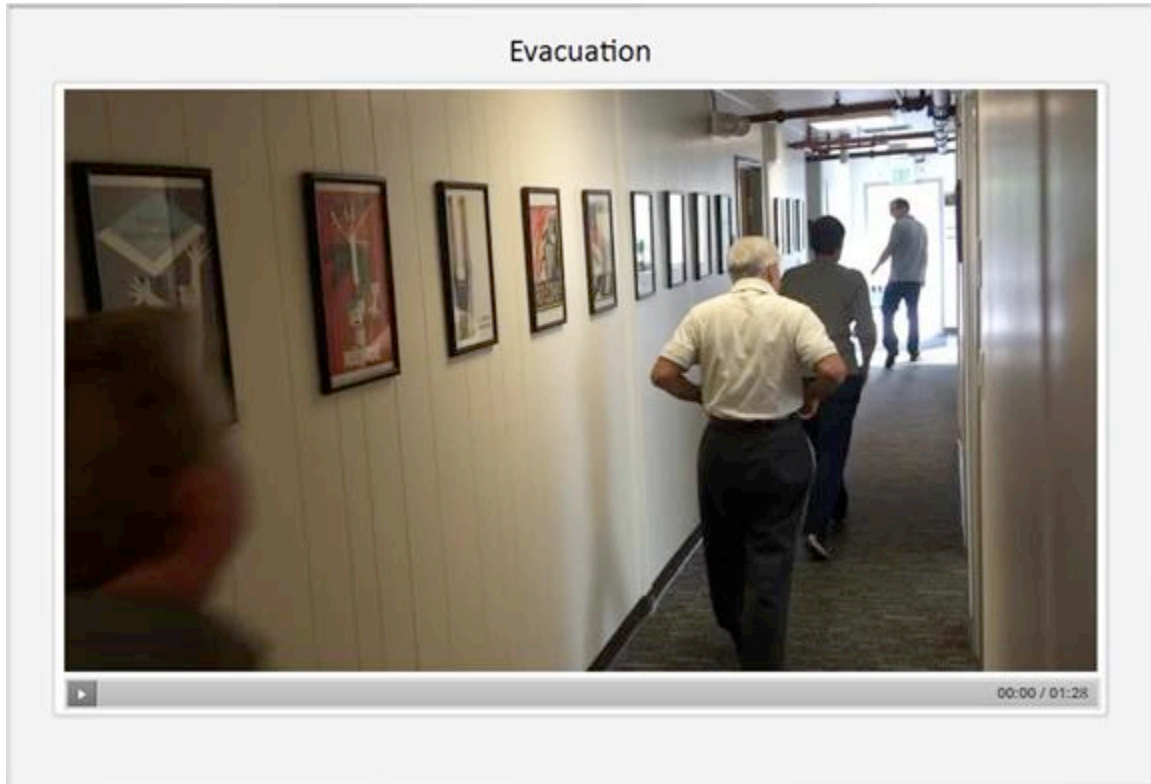
[Continue](#)

Narration:

Now that we understand the types of emergencies that could occur, and have an understanding of the notification and communication process we turn our attention on three protective actions that everyone should know how to implement to keep safe.

Once implemented Protective Actions remain in effect until emergency responders give the all clear. We start with evacuation.

4.10 Evacuation



Video Narration:

Evacuation is used to remove personnel from an area under threat to an area of safety. Depending on the scale and location of the event, or emergency, evacuations may be for occupants of a single building, it may be to evacuate multiple buildings or an area or there may be an order to evacuate the entire site. In fact the Lab is divided into zones as shown here. In this way, an evacuation can be directed zone by zone as a way to control the process to help make sure people are safe. Because of this, it is important to know what zone or zones you work in so this zone map is available at the end of this video.

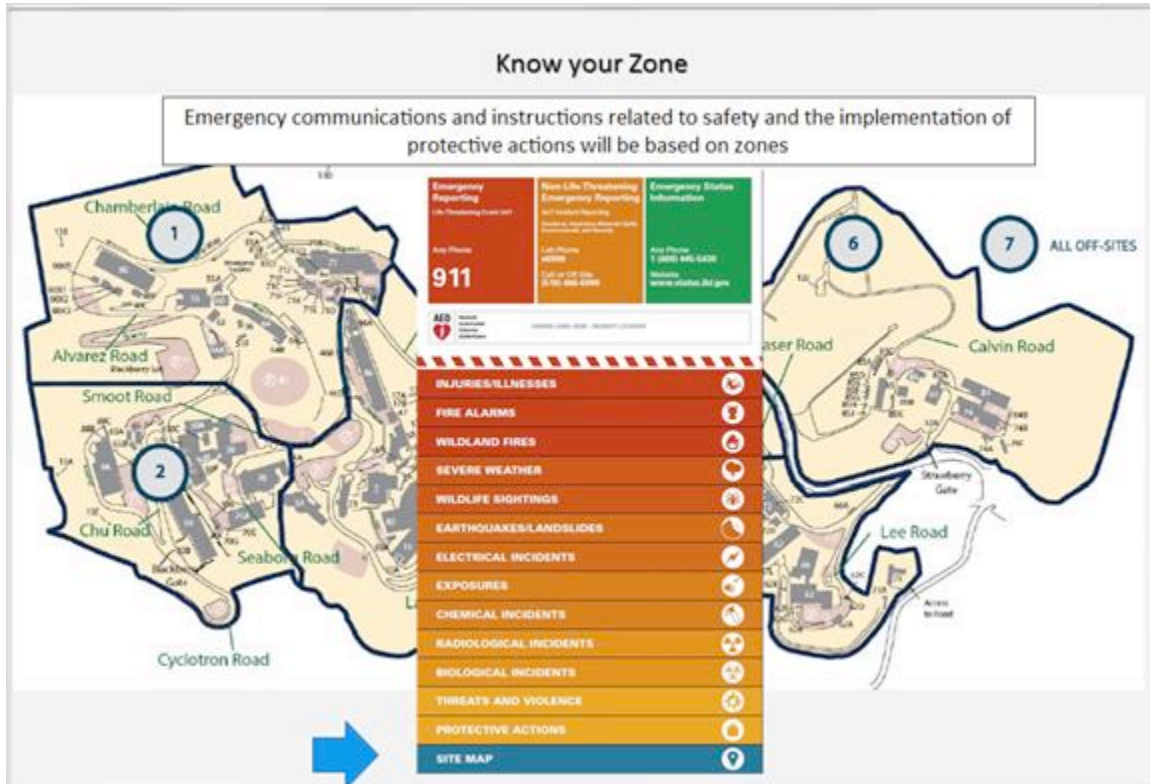
If there is an evacuation, exit the building when it is safe and go directly to the designated emergency assembly area (unless it is unsafe to do so). If possible bring your keys, purse phone and other valuables, but do not delay evacuation to retrieve personal items.

It's important to remain at the emergency assembly area (and not leave), and here's why? First it is an information hub. Meaning the emergency team members are in contact with the Lab's emergency operation centers so can provide up-to-the minute instructions on what to do or where to go etc. Second, the Lab needs to account for your whereabouts. Are you safe, or are you stuck in the building and need help? Having

an accurate count is important because it can prevent emergency personnel from having to go into a dangerous area to find someone who has already left the building, but didn't check in.



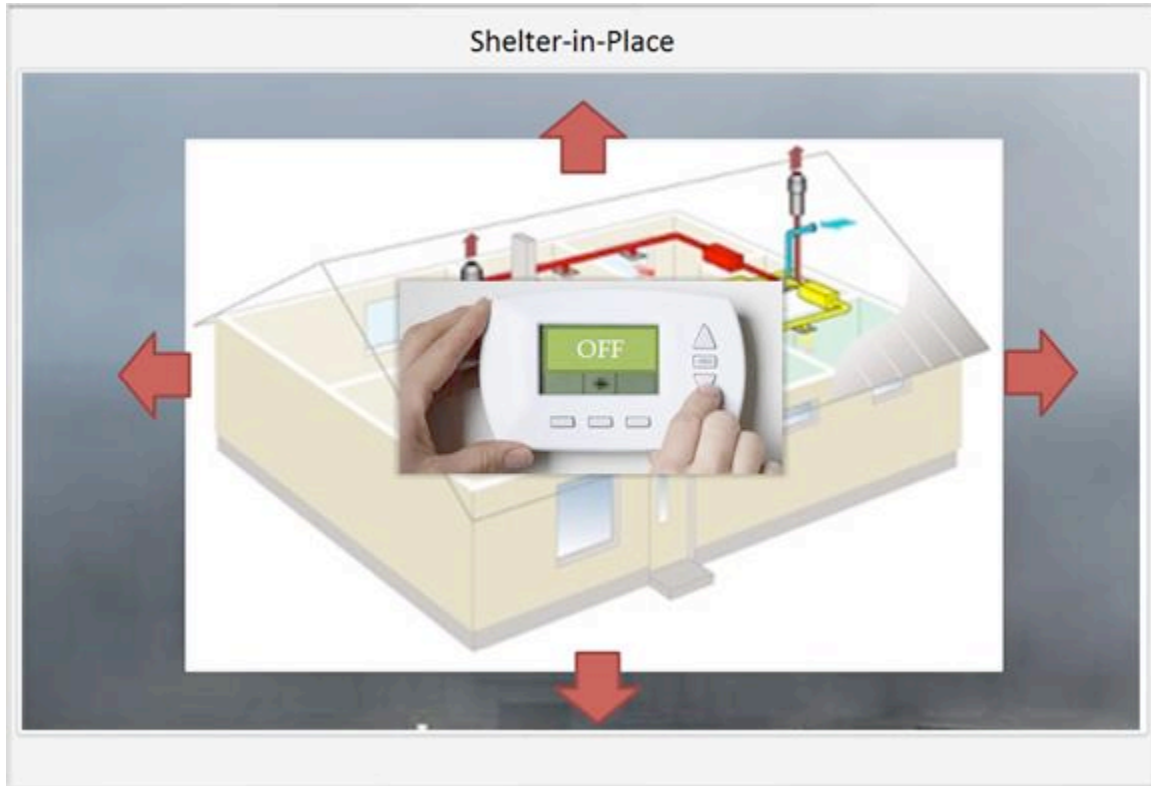
4.11 Know your zone



Narration:

As mentioned in the previous video, you should become familiar with the zone or zones that you work in as presented on this map. The reason is that emergency communications and instructions related to safety and the implementation of protective actions will be based on zones. As reference, this zone map is on the back page of the Emergency Guide.

4.12 Shelter in place



Narration:

Shelter in place may be enacted if there is an airborne health hazard threatening the area. If you are outside move into the nearest building. Since the goal is to keep the contaminated air outside to protect occupants from inhaling it, when possible, you want to close all doors and windows (to create a seal). Then, you want to move to the inner portion of the building to medium to small rooms as a way to put distance between you and the outside hazard.

Since outside air comes in through air conditioning and heating systems, (if you are able to do so) it can be helpful to turn off central heating and air conditioning or close the vents. If available you can use tape to seal windows and doors, or towels to put below a door seal.

4.13 Lock down

Lockdown

Lockdown is implemented to minimize the risk to personnel health and safety and protect laboratory assets. It can be used for the following:


- A security-related event or incident exists.
- There is a potential threat of violence (e.g., bomb threat).
- There is a physical hazard outside of buildings that is a threat to personnel (e.g., mountain lion).
- There are missing assets

NOTE: Lockdown can be implemented at the facility, zone or site level.

During a Lockdown personnel may want to:

- Lock doors, close blinds or window shades.
- Move away from doors/windows and get low to the floor.
- Wait for further instruction.

Use your judgement to implement protective measures (run, hide, fight).



Related information

Wildlife sightings

Pop-up information on wildlife sightings and threat response

[Wildlife sightings](#)

Active Shooter

Pop-up information including FBI video on run,hide, fight

[Active Shooter response](#)

Notes:

Lock down is used to minimize the risk to personnel health and safety and can be implemented for the following. Please review this information.

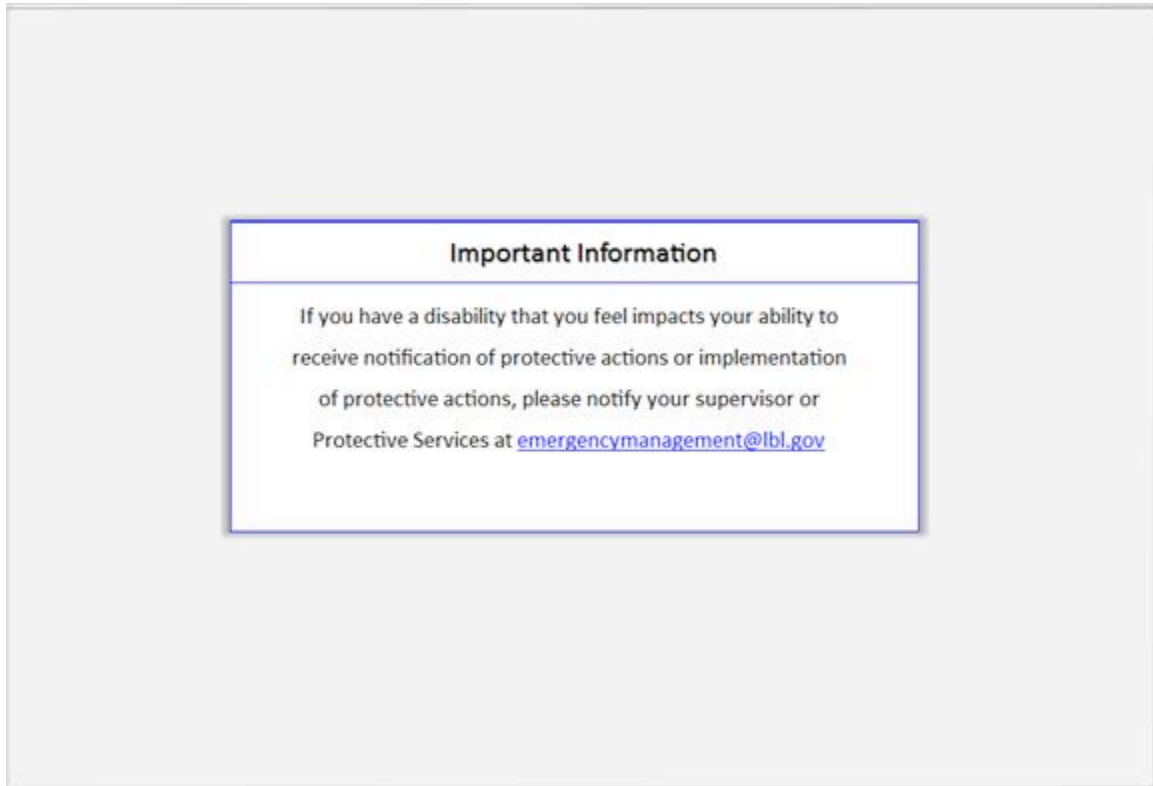
4.14 Emergency Guide

The screenshot displays the 'Emergency Guide | Protective Actions' website. On the left is a vertical navigation menu with a red header 'EMERGENCY GUIDE'. It includes sections for 'Emergency Reporting' (911), 'Non-Life-Threatening Emergency Reporting', 'Emergency Status Information', and a list of incident types: INJURIES/ILLNESSES, FIRE ALARMS, WILDLAND FIRES, SEVERE WEATHER, WILDLIFE SIGHTINGS, EARTHQUAKES/LANDSLIDES, ELECTRICAL INCIDENTS, EXPOSURES, CHEMICAL INCIDENTS, RADIOLOGICAL INCIDENTS, BIOLOGICAL INCIDENTS, THREATS AND VIOLENCE, PROTECTIVE ACTIONS (highlighted), and SITE MAP. On the right, three overlapping cards provide details on protective actions. The top card, 'HOW WILL I KNOW ABOUT A PROTECTIVE ACTION IS BEING PUT IN PLACE?', lists notification methods like public address systems, LBNL notifications, local fire alarms, and self-initiated responses, and features a 'PDF Version' button. The middle card, 'SHELTER-IN-PLACE: WHAT SHOULD I DO?', explains its purpose and lists instructions: move to an interior room, allow exterior decontamination, do not eat/drink, seal off doorways, and wait for instructions. The bottom card, 'LOCKDOWN: WHAT SHOULD I DO?', explains its purpose and lists instructions: remain calm, move away from windows, protect yourself from debris, lock/barricade doors, and wait for instructions.

Narration:

This is just to let you know that the protective actions we just reviewed are in the emergency guide. And there is a PDF version of the guide that you can download by selecting “E” on the a-to-z index and choosing “Emergency Guide.”

4.15 Disability assistance



Narration:

If you have a disability that you feel impacts your ability to receive notification of protective actions or implementation of protective actions, please notify your supervisor or Protective Services at emergencymanagement@lbl.gov

4.16 Fire Alarm Question

You are in the cafeteria and an alarm goes off in the building. What do you do?

- A) Stay where you are and wait for further instructions.
- B) Evacuate the building and go to the designated Emergency Assembly Area.
- C) Evacuate the building and walk back to your office.
- D) Take cover underneath the table..

Narration:

You are in the cafeteria and an alarm goes off in the building. What do you do? Select the best answer.

Feedback:

The correct response is A) Evacuate to the nearest assembly point and wait for further instructions.

4.17 Your Responsibilities

Report life-threatening emergencies to 911 and incidents to 6999.
Implement protective actions quickly and efficiently

It is everyone's responsibility to help ensure our colleagues and visitors are aware of the emergency, and are implementing the necessary protective actions.

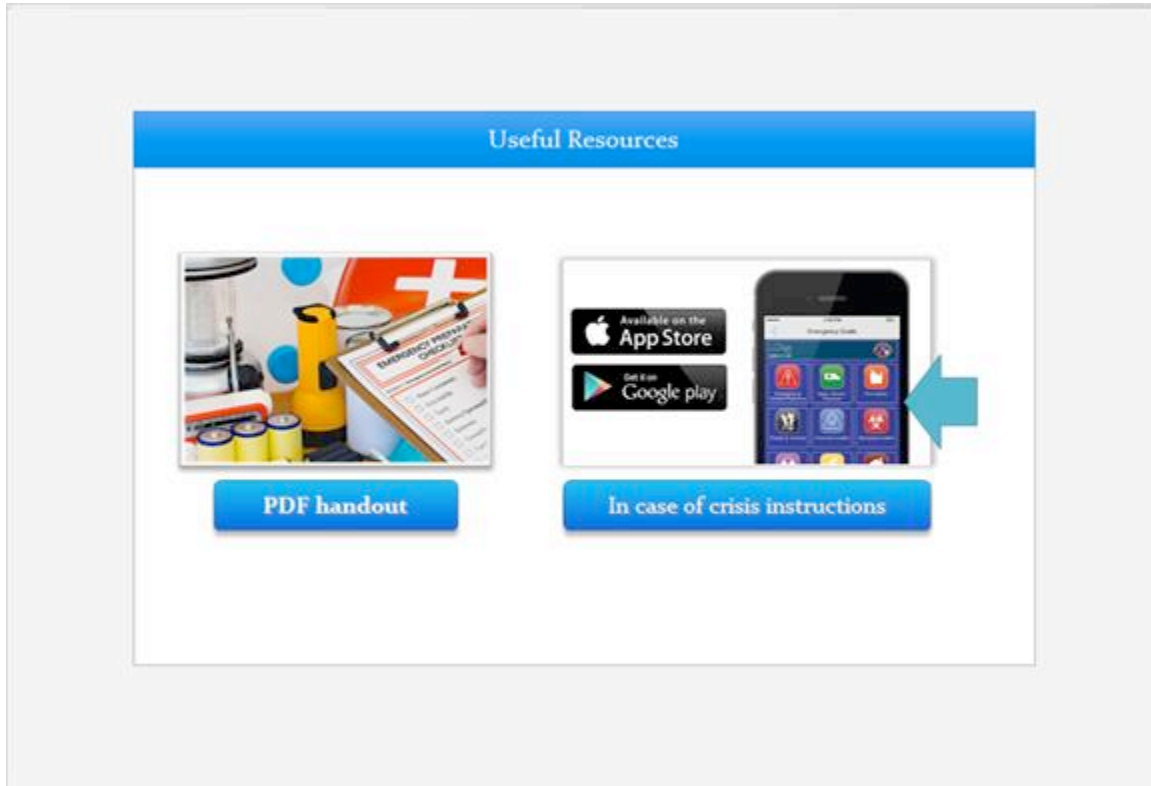
If you work in an offsite location

Emergency Reporting	Non-Life-Threatening Emergency Reporting	Emergency Status Information
Life-Threatening Event 24/7	24/7 Incident Reporting Accidents, Hazardous Materials Spills, Environmental, and Security	
Any Phone 911	Lab Phone x6999 Call or Off Site (510) 486-6999	Any Phone 1 (800) 445-5830 Website www.status.lbl.gov

Narration:

In closing, one of the key responsibilities we all have is to report life threatening emergencies to 911, and report incidents to 6999, and to implement protective actions quickly and efficiently, and it is everyone's responsibility to help ensure our colleagues and visitors are aware of the emergency, and are implementing the necessary protective actions. Also, if you work in an offsite location (JGI, JBEI, OCFO) etc, report emergencies using 911, and if safe to do so, follow up with a phone call to 6-999. This alerts the main site to assist with the response.

4.18 Your Responsibilities



Finally, I want to draw attention to two helpful resources:

1. Home preparedness kit
 - a. http://www2.lbl.gov/ehs/training/webcourses/PSD0135/story_content/external_files/EmergencyKit.pdf
2. Instructions for downloading and installing the In case of crisis app for both iPhone and Android.
 - a. This app provides easy access to emergency information represented by icons and that corresponds to the various events that can potentially occur here at the Lab such as Wildland Fires, Wildlife Sightings, Injury/Illness/Exposure, Biological Incidents, and these are just a few examples.
 - b. http://www2.lbl.gov/ehs/training/webcourses/PSD0135/story_content/external_files/InCaseOfCrisis.pdf

Additional Resources:

Active Shooter video by FBI Run, Hide, Fight”

<https://www.fbi.gov/about/partnerships/office-of-partner-engagement/active-shooter-resources>

Course Credit:

Use the link below to log into Berkeley lab Training and sign the electronic acknowledgement for course credit. You may need to copy and paste this link into your browser.

<https://coursebuilder.lbl.gov/course/exam.aspx?cid=415&sid=3627>